Type 3650 Series

Key Features

Ceramic base provides high SRF

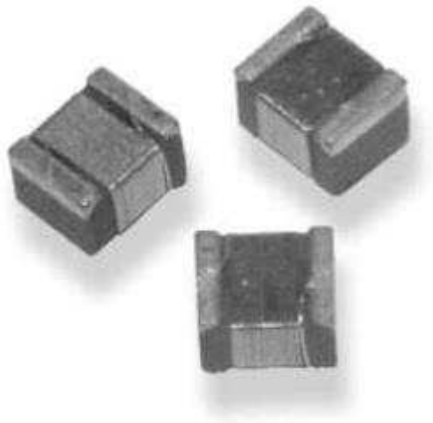
Ultra-compact inductors provide high Q factors

High Q and high current versions available

Suitable for fully automated assembly

Outstanding endurance from Pull-up force, mechanical shock and pressure

AEC-Q200 Qualified (Standard Type only)



TE Connectivity is proud to announce that the 3650 Series wire wound Low Inductance, High Frequency Chip Inductor (standard version) is now AEC-Q200 Qualified. The 3650 is available in four package sizes, includes High Current and High Q versions and is designed for automatic placement. Please note; These products are now supplied unmarked.

Characteristics – Electrical

Type 36501E Series – 0402 Package AEC-Q200

Inductance		Tolerance (± %)	L Freq. (MHz)	Quality Factor Min.	SRF (GHz) Min	DCR (Ω) Max.	IDC (mA) Max.	900MHz		1.7GHz	
Code	NH							L	Q	L	Q
1N0	1.0	10	250	16	12.70	0.045	1360	1.02	77	1.02	69
1N9	1.9	10	250	16	11.30	0.070	1040	1.72	68	1.74	82
2N0	2.0	10	250	16	11.10	0.070	1040	1.93	54	1.93	75
2N2	2.2	10	250	19	10.80	0.070	960	2.19	59	2.23	100
2N4	2.4	10	250	15	10.50	0.070	790	2.24	51	2.27	68
2N7	2.7	10	250	16	10.40	0.120	640	2.23	42	2.25	61
3N3	3.3	10	250	19	7.00	0.066	840	3.10	65	3.12	87
3N6	3.6	5, 10	250	19	6.80	0.066	840	3.56	45	3.62	71
3N9	3.9	5, 10	250	19	5.80	0.066	840	3.89	50	4.00	75
4N3	4.3	5, 10	250	18	6.00	0.091	700	4.19	47	4.30	71
4N7	4.7	5, 10	250	18	4.70	0.130	640	4.55	48	4.68	68
5N1	5.1	5, 10	250	20	4.80	0.083	800	5.15	56	5.25	82
5N6	5.6	5, 10	250	20	4.80	0.083	760	5.16	54	5.28	81
6N2	6.2	5, 10	250	20	4.80	0.083	760	6.16	52	6.37	76
6N8	6.8	5, 10	250	20	4.80	0.083	680	6.56	63	6.93	78
7N5	7.5	5, 10	250	22	4.80	0.104	680	7.91	60	8.22	88
8N2	8.2	5, 10	250	22	4.40	0.104	680	8.50	57	8.85	84
8N7	8.7	5, 10	250	18	4.10	0.200	480	8.78	54	9.21	73
9N0	9.0	5, 10	250	22	4.16	0.104	680	9.07	62	9.53	78
9N5	9.5	5, 10	250	18	4.00	0.200	480	9.42	54	9.98	69

Downloaded from Arrow.com.

Characteristics – Electrical

Type 36501E Series – 0402 Package (Continued)

Inductance		Tolerance (± %)	L Freq. (MHz)	Quality Factor Min.	SRF (GHz) Min	DCR (Ω) Max.	IDC (mA) Max.	900MHz		1.7GHz	
Code	nH							L	Q	L	Q
10N	10	2, 5, 10	250	21	3.90	0.195	480	9.80	50	10.10	67
11N	11	2, 5, 10	250	24	3.68	0.120	640	10.70	52	11.20	78
12N	12	2, 5, 10	250	24	3.60	0.120	640	11.90	53	12.70	71
13N	13	2, 5, 10	250	24	3.45	0.210	440	13.40	51	14.60	57
15N	15	2, 5, 10	250	24	3.28	0.172	560	14.60	55	15.50	77
16N	16	2, 5, 10	250	24	3.10	0.220	560	16.60	46	18.80	47
18N	18	2, 5, 10	250	25	3.10	0.230	420	18.30	57	20.30	62
19N	19	2, 5, 10	250	24	3.04	0.202	480	19.10	50	21.10	67
20N	20	2, 5, 10	250	25	3.00	0.250	420	20.70	52	23.70	53
22N	22	2, 5, 10	250	25	2.80	0.300	400	23.20	53	26.80	53
23N	23	2, 5, 10	250	24	2.72	0.300	400	23.80	49	26.90	64
24N	24	2, 5, 10	250	25	2.70	0.300	400	25.10	51	29.50	50
27N	27	2, 5, 10	250	24	2.48	0.300	400	28.70	49	33.50	63
30N	30	2, 5, 10	250	25	2.35	0.350	400	31.10	46	38.50	39
33N	33	2, 5, 10	250	24	2.35	0.350	400	34.90	31	41.70	32
36N	36	2, 5, 10	250	24	2.32	0.440	320	39.50	44	48.40	53
39N	39	2, 5, 10	250	25	2.10	0.550	200	41.70	47	50.20	45
40N	40	2, 5, 10	250	24	2.24	0.500	320	39.00	44	47.40	33
43N	43	2, 5, 10	250	25	2.03	0.810	100	45.80	49	61.60	34
47N	47	2, 5, 10	250	25	2.10	0.830	150	50.00	38	55.80	37
51N	51	2, 5, 10	250	25	1.75	0.820	100	50.40	47	59.40	37
56N	56	2, 5, 10	250	25	1.76	0.970	100	57.40	49	72.40	40
68N	68	2, 5, 10	250	22	1.62	1.120	100	69.60	45	83.40	38
82N	82	2, 5, 10	250	22	1.26	1.550	50	-	-	-	-
R10	100	2, 5, 10	250	22	1.16	2.000	30	-	-	-	-
R12	120	2, 5, 10	250	20	>1.80	2.660	50	-	-	-	-

Type 36501J Series – 0603 Package AEC-Q200

Inductance		Tolerance (± %)	L Freq. (MHz)	Quality Factor Min.	SRF (GHz) Min	DCR (Ω) Max.	IDC (mA) Max.	900MHz		1.7GHz	
Code	nH							L	Q	L	Q
1N6	1.6	5, 10	250	24	12.5	0.030	700	1.53	35	1.58	55
1N8	1.8	5, 10	250	16	12.5	0.045	700	1.63	35	1.66	50
2N2	2.2	5, 10	250	15	6.00	0.100	700	2.18	41	2.20	64
2N3	2.3	5, 10	250	16	>4.00	0.140	700	2.32	32	2.35	40
3N3	3.3	2, 5, 10	250	22	>6.00	0.080	700	3.35	47	3.40	65
3N6	3.6	2, 5, 10	250	22	5.80	0.063	700	3.53	49	3.58	65
3N9	3.9	2, 5, 10	250	22	>6.00	0.080	700	3.95	49	3.96	67
4N3	4.3	2, 5, 10	250	22	5.80	0.063	700	4.32	49	4.43	67
4N5	4.5	2, 5, 10	250	20	5.80	0.120	700	4.74	55	4.87	92
4N7	4.7	2, 5, 10	250	25	5.80	0.120	700	4.65	53	4.80	67
5N1	5.1	2, 5, 10	250	20	5.80	0.160	700	5.13	47	5.36	56
5N6	5.6	2, 5, 10	250	20	5.80	0.170	700	5.53	56	5.86	77
6N2	6.2	2, 5, 10	250	25	5.80	0.110	700	6.28	60	6.40	85
6N3	6.3	2, 5, 10	250	25	5.80	0.110	700	6.67	41	6.86	61
6N8	6.8	2, 5, 10	250	27	5.80	0.110	700	6.75	60	7.10	85
7N5	7.5	2, 5, 10	250	28	4.80	0.106	700	7.70	60	7.82	61
8N2	8.2	2, 5, 10	250	27	4.80	0.110	700	8.25	64	8.40	81
8N7	8.7	2, 5, 10	250	28	4.80	0.109	700	8.86	62	9.32	58
9N1	9.1	2, 5, 10	250	35	4.80	0.130	700	9.20	70	9.70	80
9N5	9.5	2, 5, 10	250	28	5.40	0.135	700	9.70	59	9.92	61

Downloaded from Arrow.com.

Type 36501J Series – 0603 Package (continued)

Inductance		Tolerance (± %)	L Freq. (MHz)	Quality Factor Min.	SRF (GHz) Min	DCR (Ω) Max.	IDC (mA) Max.	900MHz		1.7GHz	
Code	nH							L	Q	L	Q
10N	10	2, 5, 10	250	31	4.80	0.130	700	10.0	66	10.6	83
11N	11	2, 5, 10	250	31	4.00	0.086	700	11.3	53	12.1	56
12N	12	2, 5, 10	250	35	4.00	0.130	700	12.3	72	13.5	83
15N	15	2, 5, 10	250	35	4.00	0.170	700	15.4	64	16.8	89
16N	16	2, 5, 10	250	35	3.30	0.110	700	16.5	55	18.0	52
17N	17	2, 5, 10	250	35	3.20	0.170	700	17.6	56	19.4	44
18N	18	2, 5, 10	250	35	3.10	0.170	700	18.7	70	21.4	69
20N	20	2, 5, 10	250	40	3.00	0.190	700	20.7	80	23.5	30
22N	22	2, 5, 10	250	38	3.00	0.190	700	22.8	73	26.1	71
23N	23	2, 5, 10	250	38	2.85	0.190	700	24.1	71	28.0	71
24N	24	2, 5, 10	250	38	2.80	0.130	700	25.7	45	30.9	40
27N	27	2, 5, 10	250	40	2.80	0.220	600	29.2	74	34.6	65
30N	30	2, 5, 10	250	40	2.80	0.150	600	31.4	47	39.8	28
33N	33	2, 5, 10	250	40	2.30	0.220	600	36.0	67	49.5	42
36N	36	2, 5, 10	250	37	2.30	0.250	600	39.1	47	48.9	24
39N	39	2, 5, 10	250	40	2.20	0.250	600	42.7	60	60.2	40
43N	43	2, 5, 10	200	38	2.00	0.280	600	46.9	44	60.3	21
47N	47	2, 5, 10	200	38	2.00	0.280	600	52.2	62	77.2	35
51N	51	2, 5, 10	200	38	1.90	0.280	600	55.5	69	82.2	34
56N	56	2, 5, 10	200	38	1.90	0.310	600	62.5	56	97.0	26
62N	62	2, 5, 10	200	37	1.80	0.340	600	68.0	40	110	10
68N	68	2, 5, 10	200	37	1.70	0.340	600	80.5	54	168	21
72N	72	2, 5, 10	150	34	1.70	0.490	600	82.0	53	135	20
82N	82	2, 5, 10	150	34	1.70	0.540	400	96.2	54	177	21
91N	91	2, 5, 10	150	30	1.70	0.500	400	110.0	50	416.4	6
R10	100	2, 5, 10	150	34	1.40	0.580	400	124.0	49	319.5	13
R11	110	2, 5, 10	150	32	1.35	0.610	300	138.0	43	342.7	15
R12	120	2, 5, 10	150	32	1.30	0.650	300	166.0	39	529.3	8
R13	130	2, 5, 10	150	30	1.40	0.720	300	185.0	60	-	-
R14	140	2, 5, 10	100	28	1.30	0.870	280	190.0	80	-	-
R15	150	2, 5, 10	100	28	1.30	0.950	280	230.0	25	-	-
R16	160	2, 5, 10	100	25	1.30	1.400	280	215.0	20	-	-
R18	180	2, 5, 10	100	25	1.25	1.400	250	305.0	22	-	-
R22	220	2, 5, 10	100	25	1.20	1.600	250	377.0	21	-	-
R26	260	2, 5, 10	100	25	1.00	2.000	200	469.0	21	-	-
R27	270	2, 5, 10	100	25	0.90	2.100	200	523.0	19	-	-
R28	280	2, 5, 10	100	25	1.00	2.400	100	524.0	18	-	-
R30	300	2, 5, 10	100	25	0.75	2.500	150	539.7	21	-	-
R33	330	2, 5, 10	100	25	0.90	3.800	100	680.4	20	-	-
R39	390	2, 5, 10	100	25	0.90	4.350	100	734.5	29	-	-
R47	470	2, 5, 10	100	23	0.60	3.600	80	-	-	-	-

Type 36502A Series – 0805 Package AEC-Q200

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
2N7	2.7	±5, ±10%	250	80 @ 1500MHz	7.900	0.06	800
2N8	2.8	±5, ±10%	250	80 @ 1500MHz	7.900	0.06	800
3N0	3.0	±5, ±10%	250	65 @ 1500MHz	7.900	0.06	800
3N3	3.3	±5, ±10%	250	50 @ 1500MHz	6.000	0.08	600
3N9	3.9	±5, ±10%	250	50 @ 1500MHz	5.500	0.08	600
4N7	4.7	±5, ±10%	250	65 @ 1000MHz	5.500	0.08	600
5N6	5.6	±5, ±10%	250	65 @ 1000MHz	5.500	0.08	600

Downloaded from Arrow.com.

Type 36502A Series – 0805 Package (continued)

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
6N2	6.2	±5, ±10%	250	50 @ 1000MHz	5.500	0.11	600
6N8	6.8	±5, ±10%	250	50 @ 1000MHz	5.500	0.11	600
7N5	7.5	±5, ±10%	250	50 @ 1000MHz	4.500	0.14	600
8N2	8.2	±5, ±10%	250	50 @ 1000MHz	4.700	0.12	600
8N7	8.7	±5, ±10%	250	50 @ 1000MHz	4.000	0.21	400
10N	10	±2, ±5, ±10%	250	60 @ 500MHz	4.200	0.10	600
12N	12	±2, ±5, ±10%	250	50 @ 500MHz	4.000	0.15	600
15N	15	±2, ±5, ±10%	250	50 @ 500MHz	3.400	0.17	600
18N	18	±2, ±5, ±10%	250	50 @ 500MHz	3.300	0.20	600
20N	20	±2, ±5, ±10%	250	55 @ 500MHz	2.600	0.22	500
22N	22	±2, ±5, ±10%	250	55 @ 500MHz	2.600	0.22	500
24N	24	±2, ±5, ±10%	250	50 @ 500MHz	2.000	0.22	500
27N	27	±2, ±5, ±10%	250	55 @ 500MHz	2.500	0.25	500
30N	30	±2, ±5, ±10%	250	60 @ 500MHz	2.050	0.25	500
33N	33	±2, ±5, ±10%	250	60 @ 500MHz	2.050	0.27	500
36N	36	±2, ±5, ±10%	250	55 @ 500MHz	1.700	0.27	500
39N	39	±2, ±5, ±10%	250	60 @ 500MHz	2.000	0.29	500
43N	43	±2, ±5, ±10%	200	60 @ 500MHz	1.650	0.34	500
47N	47	±2, ±5, ±10%	200	60 @ 500MHz	1.650	0.31	500
56N	56	±2, ±5, ±10%	200	60 @ 500MHz	1.550	0.34	500
68N	68	±2, ±5, ±10%	200	60@ 500MHz	1.450	0.38	500
72N	72	±2, ±5, ±10%	150	65 @ 500MHz	1.400	0.40	500
82N	82	±2, ±5, ±10%	150	65 @ 500MHz	1.300	0.42	400
91N	91	±2, ±5, ±10%	150	65 @ 500MHz	1.200	0.48	400
R10	100	±2, ±5, ±10%	150	65 @ 500MHz	1.200	0.46	400
R11	110	±2, ±5, ±10%	150	50 @ 250MHz	1.000	0.48	400
R12	120	±2, ±5, ±10%	150	50 @ 250MHz	1.100	0.51	400
R15	150	±2, ±5, ±10%	100	50 @ 250MHz	0.920	0.56	400
R16	160	±2, ±5, ±10%	100	50 @ 250MHz	0.870	0.60	400
R18	180	±2, ±5, ±10%	100	50 @ 250MHz	0.870	0.64	400
R20	200	±2, ±5, ±10%	100	50 @ 250MHz	0.860	0.66	400
R22	220	±2, ±5, ±10%	100	50 @ 250MHz	0.850	0.70	400
R24	240	±2, ±5, ±10%	100	44 @ 250MHz	0.690	1.00	350
R25	250	±2, ±5, ±10%	100	50 @ 250MHz	0.680	1.00	350
R27	270	±2, ±5, ±10%	100	48 @ 250MHz	0.650	1.00	350
R30	300	±2, ±5, ±10%	100	48 @ 250MHz	0.620	1.20	330
R33	330	±2, ±5, ±10%	100	48 @ 250MHz	0.600	1.40	310
R36	360	±2, ±5, ±10%	100	48 @ 250MHz	0.580	1.45	300
R39	390	±2, ±5, ±10%	100	48 @ 250MHz	0.560	1.50	290
R43	430	±2, ±5, ±10%	50	33 @ 100MHz	0.430	1.70	230
R47	470	±2, ±5, ±10%	50	33 @ 100MHz	0.375	1.70	250
R56	560	±2, ±5, ±10%	25	23 @ 50MHz	0.340	1.90	230
R60	600	±2, ±5, ±10%	25	23 @ 50MHz	0.260	1.60	450
R62	620	±2, ±5, ±10%	25	23 @ 50MHz	0.220	2.20	210
R68	680	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.20	190
R75	750	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.30	180
R82	820	±2, ±5, ±10%	25	23 @ 50MHz	0.200	2.35	180
1R0	1000	±2, ±5, ±10%	25	20 @ 50MHz	0.100	2.50	170
1R2	1200	±2, ±5, ±10%	7.9	18 @ 25MHz	0.100	2.50	170
1R5	1500	±2, ±5, ±10%	7.9	16 @ 25MHz	0.100	2.50	170
1R8	1800	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.080	2.50	170
2R2	2200	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.060	2.70	160
2R7	2700	±2, ±5, ±10%	7.9	16 @ 7.9MHz	0.050	3.10	150
3R3	3300	±2, ±5, ±10%	7.9	15 @ 7.9MHz	0.040	4.40	90
4R7	4700	±2, ±5, ±10%	7.9	15 @ 7.9MHz	0.040	6.40	90

Downloaded from Arrow.com.

Type 36502C Series – 1008 Package AEC-Q200

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
4N7	4.7	±5, ±10%	50	50 @ 1500MHz	4.000	0.15	1000
5N6	*5.6	±5, ±10%	50	50 @ 1500MHz	4.000	0.15	1000
10N	*10	±2, ±5, ±10%	50	50 @ 500MHz	4.100	0.08	1000
12N	*12	±2, ±5, ±10%	50	50 @ 500MHz	3.300	0.09	1000
15N	*15	±2, ±5, ±10%	50	50 @ 500MHz	2.500	0.11	1000
18N	*18	±2, ±5, ±10%	50	50 @ 350MHz	2.400	0.12	1000
22N	*22	±2, ±5, ±10%	50	55 @ 350MHz	2.400	0.12	1000
24N	24	±2, ±5, ±10%	50	55 @ 350MHz	1.900	0.13	1000
27N	*27	±2, ±5, ±10%	50	55 @ 350MHz	1.600	0.13	1000
30N	30	±2, ±5, ±10%	50	60 @ 350MHz	1.600	0.14	1000
33N	*33	±2, ±5, ±10%	50	60 @ 350MHz	1.600	0.14	1000
36N	36	±2, ±5, ±10%	50	60 @ 350MHz	1.600	0.15	1000
39N	*39	±2, ±5, ±10%	50	60 @ 350MHz	1.500	0.15	1000
47N	*47	±2, ±5, ±10%	50	65 @ 350MHz	1.500	0.16	1000
56N	*56	±2, ±5, ±10%	50	65 @ 350MHz	1.300	0.18	1000
62N	*62	±2, ±5, ±10%	50	65 @ 350MHz	1.250	0.20	1000
68N	*68	±2, ±5, ±10%	50	65 @ 350MHz	1.300	0.20	1000
75N	75	±2, ±5, ±10%	50	60 @ 350MHz	1.100	0.21	1000
82N	*82	±2, ±5, ±10%	50	60 @ 350MHz	1.000	0.22	1000
91N	91	±2, ±5, ±10%	50	50 @ 350MHz	1.000	0.45	1000
R10	*100	±2, ±5, ±10%	25	60 @ 350MHz	1.000	0.56	650
R12	*120	±2, ±5, ±10%	25	60 @ 350MHz	0.950	0.63	650
R15	*150	±2, ±5, ±10%	25	45 @ 100MHz	0.850	0.70	800
R18	*180	±2, ±5, ±10%	25	45 @ 100MHz	0.750	0.77	620
R22	*220	±2, ±5, ±10%	25	45 @ 100MHz	0.700	0.84	500
R24	*240	±2, ±5, ±10%	25	45 @ 100MHz	0.650	0.88	500
R27	*270	±2, ±5, ±10%	25	45 @ 100MHz	0.600	0.91	690
R30	*300	±2, ±5, ±10%	25	45 @ 100MHz	0.585	1.00	450
R33	*330	±2, ±5, ±10%	25	45 @ 100MHz	0.570	1.05	450
R36	*360	±2, ±5, ±10%	25	45 @ 100MHz	0.530	1.10	470
R39	*390	±2, ±5, ±10%	25	45 @ 100MHz	0.500	1.12	630
R43	*430	±2, ±5, ±10%	25	45 @ 100MHz	0.480	1.15	470
R47	*470	±2, ±5, ±10%	25	45 @ 100MHz	0.450	1.19	470
R56	*560	±2, ±5, ±10%	25	45 @ 100MHz	0.415	1.33	580
R62	*620	±2, ±5, ±10%	25	45 @ 100MHz	0.375	1.40	300
R68	*680	±2, ±5, ±10%	25	45 @ 100MHz	0.375	1.47	540
R75	*750	±2, ±5, ±10%	25	45 @ 100MHz	0.360	1.54	360
R82	*820	±2, ±5, ±10%	25	45 @ 100MHz	0.350	1.61	400
R91	*910	±2, ±5, ±10%	25	35 @ 50MHz	0.320	1.68	380
1R0	*1000	±2, ±5, ±10%	25	35 @ 50MHz	0.290	1.75	370
1R2	*1200	±2, ±5, ±10%	7.9	35 @ 50MHz	0.250	2.00	310
1R5	*1500	±2, ±5, ±10%	7.9	28 @ 50MHz	0.200	2.30	330
1R8	*1800	±2, ±5, ±10%	7.9	28 @ 50MHz	0.160	2.60	300
2R2	*2200	±2, ±5, ±10%	7.9	28 @ 50MHz	0.160	2.80	280
2R7	*2700	±2, ±5, ±10%	7.9	22 @ 25MHz	0.140	3.20	290
3R3	*3300	±2, ±5, ±10%	7.9	22 @ 25MHz	0.110	3.40	290
3R9	*3900	±2, ±5, ±10%	7.9	18 @ 25MHz	0.100	3.60	260
4R7	*4700	±2, ±5, ±10%	7.9	18 @ 25MHz	0.090	4.00	260
5R6	5600	±2, ±5, ±10%	7.9	16 @ 7.96MHz	0.020	4.00	240
6R8	6800	±2, ±5, ±10%	7.9	15 @ 7.96MHz	0.040	4.90	200
8R2	8200	±2, ±5, ±10%	7.9	15 @ 7.96MHz	0.025	6.00	170
103	10000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.020	9.00	150
123	12000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.018	10.5	130
153	15000	±2, ±5, ±10%	2.52	15 @ 7.96MHz	0.015	11.5	120

"*" Test Methods / Instrument: Network / Spectrum Analyzer

Downloaded from Arrow.com.

Type 36521J Series – 0603 Package – High Current

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
1N6	1.6	±5, ±10%	250	24	12.50	0.030	2400
3N6	3.6	±5, ±10%	250	24	5.90	0.048	2300
3N9	3.9	±5, ±10%	250	25	5.90	0.054	2200
6N8	6.8	±5, ±10%	250	35	5.80	0.054	2100
7N5	7.5	±5, ±10%	250	38	3.70	0.059	2100
8N2	8.2	±5, ±10%	250	38	3.70	0.060	2000
10N	10	±2, ±5, ±10%	250	38	3.70	0.071	2000
12N	12	±2, ±5, ±10%	250	38	3.00	0.075	2000
15N	15	±2, ±5, ±10%	250	38	2.80	0.080	1900
18N	18	±2, ±5, ±10%	250	40	2.80	0.099	1900
22N	22	±2, ±5, ±10%	250	42	2.40	0.099	1800
24N	24	±2, ±5, ±10%	250	42	2.40	0.105	1800

Type 36531J Series – 0603 Package – High Q

Inductance		Tolerance	L Freq MHz	Q typ 250 (MHz)	SRF Typ GHz	DCR Ω Max	IDC mA Max	900MHz		1.7GHz	
Code	nH							L typ	Q typ	L typ	Q typ
1N8	1.8	±5, ±10%	250	23	16.0	0.033	2100	1.77	40	1.77	65
2N2	2.2	±5, ±10%	250	13	15.0	0.180	900	2.14	25	2.12	35
3N3	3.3	±5, ±10%	250	32	9.60	0.024	1900	3.28	67	3.32	104
3N6	3.6	±2, ±5, ±10%	250	40	9.70	0.031	1900	3.59	70	3.62	116
3N9	3.9	±2, ±5, ±10%	250	35	7.50	0.039	1600	3.88	68	3.95	108
4N3	4.3	±2, ±5, ±10%	250	30	7.50	0.080	1300	4.29	58	4.31	91
4N7	4.7	±2, ±5, ±10%	250	26	7.90	0.100	1100	4.65	48	4.71	75
5N1	5.1	±2, ±5, ±10%	250	40	8.90	0.036	1700	5.08	84	5.12	140
5N6	5.6	±2, ±5, ±10%	250	48	6.60	0.036	1700	5.6	87	5.73	456
6N	6	±2, ±5, ±10%	250	49	6.00	0.036	1700	5.92	94	6.12	154
6N8	6.8	±2, ±5, ±10%	250	42	5.80	0.042	1400	6.83	88	7.05	143
7N2	7.2	±2, ±5, ±10%	250	48	5.40	0.052	1400	7.25	96	7.38	139
7N5	7.5	±2, ±5, ±10%	250	41	5.30	0.080	1300	7.55	81	7.85	12
8N2	8.2	±2, ±5, ±10%	250	46	5.90	0.054	1400	8.21	96	8.39	148
8N7	8.7	±2, ±5, ±10%	250	46	5.50	0.054	1400	8.73	97	9.00	149
9N1	9.1	±2, ±5, ±10%	250	40	5.10	0.037	1400	9.18	76	9.64	109
9N5	9.5	±2, ±5, ±10%	250	49	4.90	0.053	1400	9.56	98	9.99	149
10N	10	±2, ±5, ±10%	250	49	4.30	0.048	1400	10.16	90	10.64	142
11N	11	±2, ±5, ±10%	250	41	4.10	0.058	1400	11.06	78	11.82	108
12N	12	±2, ±5, ±10%	250	37	4.10	0.088	1100	12.26	69	13.2	91

Downloaded from Arrow.com.

Type 36531J Series – 0603 Package – High Q (cont.)

Inductance		Tolerance	L Freq MHz	Q typ 250 (MHz)	SRF Typ GHz	DCR Ω Max	IDC mA Max	900MHz		1.7GHz	
Code	nH							L typ	Q typ	L typ	Q typ
15N	15	±2, ±5, ±10%	250	48	3.60	0.078	1200	15.41	83	17.2	124
16N	16	±2, ±5, ±10%	250	45	3.50	0.085	1100	16.37	77	18.7	116
18N	18	±2, ±5, ±10%	250	41	3.30	0.066	1200	18.56	76	20.9	100
22N	22	±2, ±5, ±10%	250	44	3.15	0.140	850	22.7	77	25.9	88
23N	23	±2, ±5, ±10%	250	40	3.00	0.183	850	24	69	29.53	80
24N	24	±2, ±5, ±10%	250	42	2.95	0.074	1100	24.9	77	28.9	91
27N	27	±2, ±5, ±10%	250	44	2.80	0.150	780	28.4	74	34.0	84
30N	30	±2, ±5, ±10%	250	49	2.80	0.130	920	31.5	82	37.9	82
33N	33	±2, ±5, ±10%	250	45	2.70	0.170	680	34.9	76	42.9	80
36N	36	±2, ±5, ±10%	250	44	2.50	0.225	720	38.5	69	50.0	64
39N	39	±2, ±5, ±10%	250	48	2.45	0.19	680	41.5	78	51.9	74
43N	43	±2, ±5, ±10%	250	45	2.45	0.17	810	45.7	83	58.1	76
47N	47	±2, ±5, ±10%	200	47	2.30	0.24	680	50.6	77	66.9	72
51N	51	±2, ±5, ±10%	200	49	2.30	0.28	660	54.6	73	71.3	62
56N	56	±2, ±5, ±10%	200	50	2.20	0.30	610	60.3	74	79.9	56
68N	68	±2, ±5, ±10%	200	46	2.00	0.33	600	75.5	73	113.3	49
72N	72	±2, ±5, ±10%	150	46	1.90	0.42	550	80.8	69	-	-
75N	75	±2, ±5, ±10%	150	46	1.90	0.52	500	84.6	71	-	-
82N	82	±2, ±5, ±10%	150	45	1.80	0.46	510	94	62	-	-
91N	91	±2, ±5, ±10%	150	45	1.65	0.58	440	103	64	-	-
R10	100	±2, ±5, ±10%	150	49	1.70	0.54	470	114	69	-	-
R11	110	±2, ±5, ±10%	150	47	1.60	0.58	440	126.2	63	-	-
R12	120	±2, ±5, ±10%	150	47	1.55	0.72	420	142.4	61	-	-
R15	150	±2, ±5, ±10%	150	47	1.35	0.82	390	188.8	57	-	-
R18	180	±2, ±5, ±10%	100	48	1.30	1.50	310	232.2	50	-	-
R20	200	±2, ±5, ±10%	100	47	1.25	2.00	280	265	47	-	-
R21	210	±2, ±5, ±10%	100	48	1.20	2.00	280	288	45	-	-
R22	220	±2, ±5, ±10%	100	47	1.10	2.00	280	315	41	-	-

Downloaded from Arrow.com.

Type 36531J Series – 0603 Package – High Q (cont.)

Inductance		Tolerance	L Freq MHz	Q typ 250 (MHz)	SRF Typ GHz	DCR Ω Max	IDC mA Max	900MHz		1.7GHz	
Code	nH							L typ	Q typ	L typ	Q typ
R25	250	±2, ±5, ±10%	100	45	1.05	3.00	240	-	-	-	-
R27	270	±2, ±5, ±10%	100	46	1.05	2.25	260	-	-	-	-
R30	300	±2, ±5, ±10%	100	47	0.99	2.80	220	-	-	-	-
R33	330	±2, ±5, ±10%	100	46	0.93	3.60	180	-	-	-	-
R36	360	±2, ±5, ±10%	100	47	0.93	4.00	170	-	-	-	-
R39	390	±2, ±5, ±10%	100	47	0.88	4.00	170	-	-	-	-

Type 36532A Series – 0805 Package – High Q

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
2N5	2.5	±5, ±10%	250	80 @ 1500MHz	6.00	0.020	1600
5N6	5.6	±5, ±10%	250	98 @ 1500MHz	6.00	0.035	1600
6N2	6.2	±5, ±10%	250	88 @ 1000MHz	4.75	0.035	1600
6N8	6.8	±5, ±10%	250	80 @ 1000MHz	4.40	0.035	1600
8N2	8.2	±5, ±10%	250	75 @ 1000MHz	3.00	0.075	1000
10N	10	±5, ±10%	250	80@ 1000MHz	3.00	0.060	1600
12N	12	±5, ±10%	250	80 @ 1000MHz	3.00	0.045	1600
15N	15	±2, ±5, ±10%	250	80 @ 1000MHz	2.80	0.100	1200
16N	16	±2, ±5, ±10%	250	72 @ 500MHz	2.95	0.060	1500
18N	18	±2, ±5, ±10%	250	75 @ 500MHz	2.55	0.060	1400
20N	20	±2, ±5, ±10%	250	70 @ 500MHz	2.05	0.055	1400
22N	22	±2, ±5, ±10%	250	80 @ 500MHz	2.00	0.100	1200
27N	27	±2, ±5, ±10%	250	75 @ 500MHz	2.00	0.070	1300
30N	30	±2, ±5, ±10%	250	65 @ 500MHz	1.95	0.095	1200
39N	39	±2, ±5, ±10%	250	65 @ 500MHz	1.60	0.110	1100
48N	48	±2, ±5, ±10%	200	65 @ 500MHz	1.40	0.095	1200
51N	51	±2, ±5, ±10%	200	65 @ 500MHz	1.40	0.120	1000

Type 36532C Series – 1008 Package – High Q

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor Min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH						
3N0	3.0	±5, ±10%	50	70 @ 1500MHz	6.00	0.04	1600
3N9	3.9	±5, ±10%	50	75 @ 1500MHz	6.00	0.05	1600
4N1	4.1	±5, ±10%	50	75 @ 1500MHz	6.00	0.05	1600
7N8	7.8	±5, ±10%	50	75 @ 500MHz	3.80	0.05	1600
10N	10	±2, ±5, ±10%	50	60 @ 500MHz	3.60	0.06	1600
12N	12	±2, ±5, ±10%	50	70 @ 500MHz	2.80	0.06	1500
18N	18	±2, ±5, ±10%	50	62 @ 350MHz	2.70	0.07	1400
22N	22	±2, ±5, ±10%	50	62 @ 350MHz	2.05	0.07	1400
33N	33	±2, ±5, ±10%	50	75 @ 350MHz	1.70	0.09	1300
39N	39	±2, ±5, ±10%	50	75 @ 350MHz	1.30	0.09	1300
47N	47	±2, ±5, ±10%	50	75 @ 350MHz	1.45	0.12	1200
56N	56	±2, ±5, ±10%	50	75 @ 350MHz	1.23	0.12	1200
68N	68	±2, ±5, ±10%	50	80 @ 350MHz	1.15	0.13	1100
82N	82	±2, ±5, ±10%	50	80 @ 350MHz	1.06	0.16	1100
R10	100	±2, ±5, ±10%	50	50@ 350MHz	0.82	0.16	1000

Parts (3.0nH, 7.8nH) are wound on a low profile bobbin. (Max 2.4 x 2.01 x 1.09)

Downloaded from Arrow.com.

Type 36541E Series – 0402 Package – High SRF

Inductance		Tolerance	L. Freq. (MHz)	Quality Factor		SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
Code	nH			900MHz	1.7GHz			
1N0	1.0	±0.2nH,±0.5nH, ±5%, ±10%	250	46	75	16.0	0.030	2300
2N0	2.0	±0.2nH,±0.5nH, ±5%, ±10%	250	58	85	15.2	0.038	2100
2N2	2.2	±0.2nH,±0.5nH, ±5%, ±10%	250	60	86	15.1	0.038	2100
2N4	2.4	±0.2nH,±0.5nH, ±5%, ±10%	250	60	83	14.0	0.042	2000
2N7	2.7	±0.2nH,±0.5nH, ±5%, ±10%	250	62	85	13.0	0.075	1500
3N3	3.3	±0.2nH,±0.5nH, ±5%, ±10%	250	66	95	12.8	0.045	1700
3N6	3.6	±0.2nH,±0.5nH, ±5%, ±10%	250	65	94	11.7	0.045	1700
3N9	3.9	±0.2nH,±0.5nH, ±5%, ±10%	250	64	98	9.50	0.045	1700
4N3	4.3	±0.5nH, ±5%, ±10%	250	63	90	7.15	0.050	1600
4N7	4.7	±0.5nH, ±5%, ±10%	250	58	83	6.85	0.070	1500
5N1	5.1	±2%, ±5%, ±10%	250	54	76	6.80	0.115	1200
5N6	5.6	±2%, ±5%, ±10%	250	73	105	6.50	0.050	1600
6N2	6.2	±2%, ±5%, ±10%	250	73	100	5.80	0.055	1600
6N8	6.8	±2%, ±5%, ±10%	250	68	94	5.80	0.065	1500
7N5	7.5	±2%, ±5%, ±10%	250	60	82	5.40	0.090	1400
8N2	8.2	±2%, ±5%, ±10%	250	68	95	5.40	0.065	1500
8N7	8.7	±2%, ±5%, ±10%	250	68	95	5.00	0.065	1500
9N0	9.0	±2%, ±5%, ±10%	250	67	92	5.00	0.080	1400
9N5	9.5	±2%, ±5%, ±10%	250	64	90	4.70	0.090	1400
10N	10	±2%, ±5%, ±10%	250	62	90	4.70	0.100	1300
11N	11	±2%, ±5%, ±10%	250	68	98	4.70	0.065	1400
12N	12	±2%,±5%, ±10%	250	66	100	4.40	0.100	1200
13N	13	±2%, ±5%, ±10%	250	62	82	4.20	0.150	870
15N	15	±2%, ±5%, ±10%	250	62	85	3.90	0.110	1100
16N	16	±2%, ±5%, ±10%	250	57	77	3.70	0.140	850
18N	18	±2%, ±5%, ±10%	250	58	74	3.55	0.120	900
19N	19	±2%, ±5%, ±10%	250	61	88	3.50	0.145	850
20N	20	±2%, ±5%, ±10%	250	58	76	3.50	0.185	780
21N	21	±2%, ±5%, ±10%	250	48	62	1.70	0.460	450
22N	22	±2%, ±5%, ±10%	250	60	74	3.30	0.160	800
23N	23	±2%, ±5%, ±10%	250	60	77	3.30	0.160	800
24N	24	±2%, ±5%, ±10%	250	55	71	3.15	0.200	700
25N	25	±2%, ±5%, ±10%	250	57	73	3.15	0.250	600
26N	26	±2%, ±5%, ±10%	250	56	74	3.15	0.285	450
27N	27	±2%, ±5%, ±10%	250	62	86	3.20	0.320	450
30N	30	±2%, ±5%, ±10%	250	61	87	2.90	0.330	450
33N	33	±2%, ±5%, ±10%	250	61	80	2.80	0.330	490
36N	36	±2%, ±5%, ±10%	250	59	76	2.80	0.380	480
37N	37	±2%, ±5%, ±10%	250	57	72	2.70	0.460	470
39N	39	±2%, ±5%, ±10%	250	56	84	2.60	0.430	450
40N	40	±2%, ±5%, ±10%	250	56	75	2.60	0.430	450
43N	43	±2%, ±5%, ±10%	250	52	68	2.50	0.520	450
47N	47	±2%, ±5%, ±10%	250	48	62	2.40	0.580	420
51N	51	±2%, ±5%, ±10%	250	52	59	2.30	0.700	360

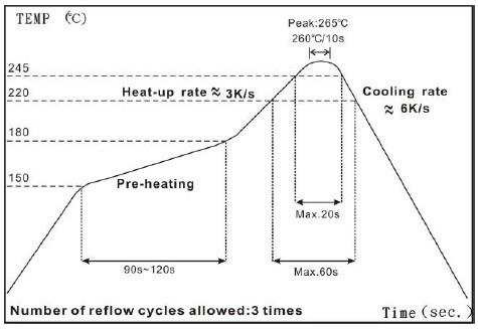
Dimensions in millimetres unless otherwise specified

Dimensions Shown for reference purposes only. Specifications subject to change

For Email, phone or live chat, go to: www.te.com/help

Downloaded from Arrow.com.

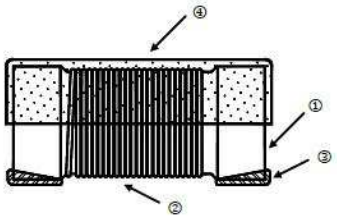
Soldering condition



IR Reflow Soldering

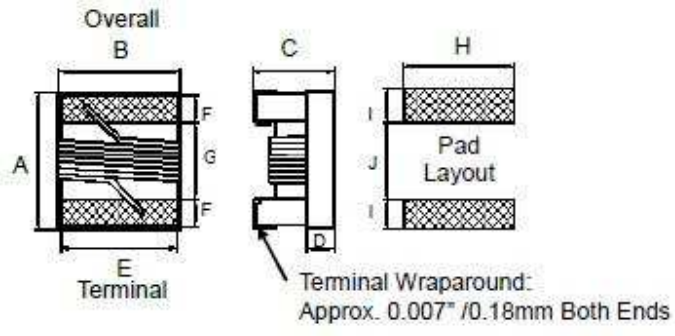
(1) Time of IR reflow soldering at maximum temperature point 260°C 10s

Construction



①	Ceramic Core	③	Electrode
②	Magnet Wire	④	UV Glue

Dimensions



Type	Size	A max	B max	C max	D max	E	F	G	H	I	J	Weight (g) (1000 pcs)
36501E	0402	1.27	0.76	0.61	0.15	0.51	0.23	0.56	0.66	0.50	0.46	0.8
36501J	0603	1.80	1.12	1.02	0.38	0.76	0.33	0.86	1.02	0.64	0.64	3.46
36502A	0805	2.29	1.73	1.52	0.51	1.27	0.44	1.02	1.78	1.02	0.76	12.13
36502C	1008	2.92	2.79	2.13	0.65	2.03	0.51	1.52	2.54	1.02	1.27	30.73
36521J	0603	1.80	1.12	1.02	0.38	0.76	0.33	0.86	1.02	0.64	0.64	3.46
36531E	0402	1.27	0.76	0.61	0.15	0.51	0.23	0.56	0.66	0.50	0.46	0.8
36531J	0603	1.80	1.12	1.02	0.38	0.76	0.33	0.86	1.02	0.64	0.64	3.46
36532A	0805	2.29	1.73	1.52	0.51	1.27	0.44	1.02	1.78	1.02	0.76	12.13
36532C	1008	2.92	2.79	2.03	0.65	2.03	0.51	1.52	2.54	1.02	1.27	30.73

Downloaded from Arrow.com.

Environmental Characteristics

Electrical Performance Test

Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4286 / E4982A
Q		HP4286 / E4982A
SRF		HP4286 / E4982A
DC Resistance (RDC)		Micro-Ohm meter (Gom 801G) / E4982A
Rated Current (IDC)		Applied the current to coils, the temperature of coil increases ΔT15°C (Ta=25°C)
Over Load	Inductors shall have no evidence of electrical and mechanical damage	Applied 2 times of rated allowed DC current to inductor for a period of 5 minutes
Withstanding Voltage	Inductors shall bear no evidence of electrical and mechanical damage.	AC voltage of 500 VAC applied between inductors terminal and case for 1 min.
Insulation Resistance	1000M ohm min.	100 VDC applied between inductor terminal and case

Mechanical Performance Test

Item	Requirement	Test Method
Vibration	Appearance: No damage L change: within ±5% Q change: within ±10%	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2 hrs for each axis (X, Y &Z), total 6 hrs
Resistance to Soldering Heat		Solder Temperature: 260±5 °C Immersion Time: 10±2 seconds
Component Adhesion (Push Test)	1 lbs. For 0402 2 lbs. For 0603 3 lbs. For the rest	The device should be soldered (260±5 for 10 seconds) to a tinned copper substrate. A dynamiter force gauge should be applied to the side of the component. The device must withstand a minimum force of 2 or 4 pounds without a failure of adhesion on termination
Drop	No damage	Dropping chip by each side and each corner. Drop 10 times in total Drop height: 100cm Drop weight: 125g
Solderability	90% covered with solder	Inductor shall be dipped in a melted solder bath at 245±5 for 3 seconds
Resistance to Solvent	No damage on appearance and marking	MIL-STD-202, Method 215

Downloaded from Arrow.com.

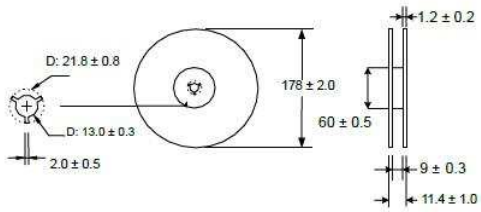
Climatic Test

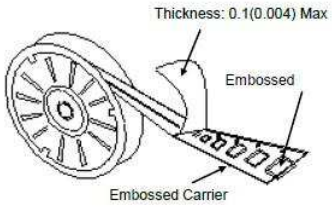
<table>
<tr><th>Item</th><th>Requirement</th><th>Test Method</th></tr>
<tr><td>Temperature Characteristic</td><td rowspan="5">Appearance: No damage
L change: within ±10%
Q change: within ±20%</td><td>-40 ~+125 °C</td></tr>
<tr><td>Humidity</td><td>Temperature: 40±2 °C
Relative Humidity: 90~95%
Time: 96±2 hrs
Measured after exposure in the room condition for 2hrs</td></tr>
<tr><td>Low Temperature Storage</td><td>Temperature: -40±2 °C
Time: 96±2 hrs
Inductors are tested after 1 hour at room temperature</td></tr>
<tr><td>Thermal Shock</td><td>One Cycle:
<table><tr><th>Step</th><th>Temperature (°C)</th><th>Time (min.)</th></tr><tr><td>1</td><td>-25±3</td><td>30</td></tr><tr><td>2</td><td>25±2</td><td>15</td></tr><tr><td>3</td><td>125±3</td><td>30</td></tr><tr><td>4</td><td>25±2</td><td>15</td></tr></table>Total 5 cycles</td></tr>
<tr><td>High Temperature Storage</td><td>Temperature: 125±2 °C
Time: 96±2 hrs
Measured after exposure in the room condition for 1 hour</td></tr>
<tr><td>High Temperature Load Life</td><td>There should be no evidence of short or open circuit.</td><td>Temperature: 85±2 °C
Time: 1000±12 hrs
Load: Allowed DC current</td></tr>
<tr><td>Damp Heat with Load</td><td></td><td>Temperature: 40±2°C
Relative Humidity: 90~95%
Time: 1000±12 hrs
Load: Allowed DC current</td></tr>
</table>

Storage Temperature: 15~28 °C; Humidity < 80% RH

Packaging

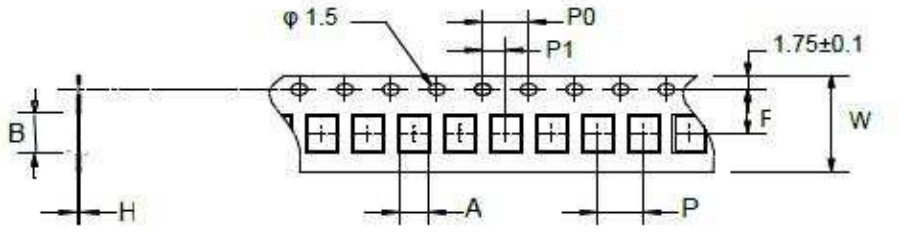
Reel dimensions





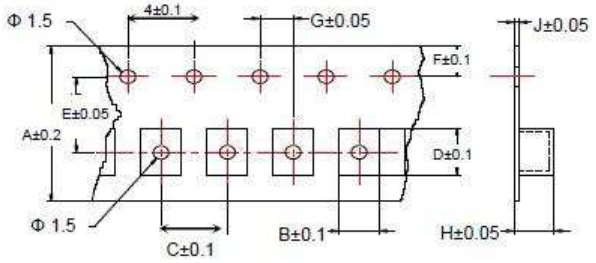
Downloaded from Arrow.com.

Paper Tape Specification and Packaging Quantity



Type	A	B	H	F	P	P0	P1	W	Reel (EA)
0402	0.81	1.23	0.73	3.50	2.00	4.00	2.00	8.00	4,000
0603	1.35	1.95	0.95	3.50	4.00	4.00	2.00	8.00	4,000

Embossed Plastic Tape Specification and Packaging Quantity



Type	A	B	C	D	E	F	G	H	J	Reel (EA)
0805	8	1.85	4	2.30	3.5	1.75	2	1.45	0.23	2,000
1008	8	2.70	4	2.80	3.5	1.75	2	2.00	0.23	2,000

How To Order

3650	1J	7N5	J	TDG
Common Part	**Case size**	**Inductance Code**	**Tolerance**	**Packaging**
3650 – Standard 3652 – High Current 3653 – High Q	1E – 0402 1J – 0603 2A – 0805 2C - 1008	See relevant table for inductance value	G – ±2% J - ±5% K - ±10% M - ±20% D - ±0.2nH C - ±0.5nH	TDG – 2000 Pieces per reel TE – 4000 Pieces per reel (1E & 1J only)

Dimensions in millimetres unless otherwise specified

Dimensions Shown for reference purposes only. Specifications subject to change

For Email, phone or live chat, go to: www.te.com/help

Downloaded from Arrow.com.